

*Smt C1*

distance of the wireless communication device from objects in the vicinity of the wireless communication device at the time.

15. (Amended) The method according to claim 12, in which the antenna (ANT) can be placed in at least two different positions, **characterized** in that for generating said matching signal, the position of the antenna (ANT) is examined.

REMARKS

1. The specification is amended. Claims 2, 5, 7, 9, 10, 12, 14 and 15 are amended. Claims 1, 4, and 11 are cancelled. The changes to Claims 2, 5 and 12 are to incorporate the subject matter of the claim from which each originally depended. Thus, the changes to these claims do not further limit or narrow the scope of the respective claim. A marked-up version of the rewritten section and claims is attached hereto.

2. Claims 1-3 and 11-14 are not anticipated by Yajima under 35 U.S.C. §102(e). It is respectfully submitted that Yajima is not a proper reference against Applicants' invention under 35 U.S.C. §102(e) because Applicants' foreign priority date precedes the U.S. filing date of Yajima. Since Applicants' invention was filed prior to November 29, 2000, the application is subject to the former version of 35 U.S.C. §102(e). (pre PG-PUB application). Under 35 U.S.C. §102(e) a U.S. patent reference is effective prior art only as of its U.S. filing date. (M.P.E.P. §2136.03) Applicants can overcome the 35 U.S.C. §102(e) rejection because their foreign priority date is earlier than Yajima's U.S. filing date.

In this case, Applicants have filed a claim of priority to Finnish Application No. 990687, filed on March 29, 1999. A

certified copy of the foreign application from which priority is claimed was filed on March 29, 2000. Since the U.S. filing date of Yajima is May 28, 1999, which is later in time than Applicants' foreign priority date, Yajima is not prior art against Applicants' invention under 35 U.S.C. §102(e).

3. Claims 4, 9, and 10 are not anticipated by Tamura under 35 U.S.C. §102(b). Claim 4 has been combined with Claim 5 to recite that the detecting means includes means to measure radio power reflected from the antenna and means to generate a matching signal on the measurement of the reflected radio power. This is not disclosed or suggested by Tamura, as is also noted by the Examiner.

In Tamura, the antenna matching of the device is changed by the effect of the environment, in this case by the effect of closing the cover of the device. Therefore, in Tamura, it is the state of the cover that is examined, and the antenna matching is changed accordingly.

However, in Applicants' invention it is possible to measure the matching of an antenna in a wireless communication device by measuring the radio power reflected back from the antenna. Consequently, the invention is based on the idea that if the matching of the antenna is poor, less power will be radiated from the antenna and, accordingly, more power will be reflected back. Because the quality of the antenna matching may be changed even drastically by the effect of external factors, the invention provides a possibility to always match the antenna with the respective environment in such a way that a maximum of the capacity of the antenna driving electronics can be made to radiate from the antenna. This will, for example, reduce the

power consumption of the device. This is not disclosed or suggested by Tamura. Therefore, Claim 5 should be allowable.

Claims 9 and 10 depend from Claim 5 and should be allowable at least in view of the dependencies.

4. Claim 6 is not unpatentable over Tamura in view of Yajima under 35 U.S.C. §103(a). As noted above, Yajima is not a proper reference against Applicants' invention. Also, Claim 6 depends from Claim 5, which as discussed above, should be allowable. Thus, Claim 6 should also be allowable in view of at least the dependency.

5. Claims 7 and 8 are not unpatentable over Tamura in view of Terk under 35 U.S.C. §103(a). Claim 7 depends from Claim 5 and Claim 8 from Claim 7. As noted above, Claim 5 is not disclosed or suggested by Tamura. Terk only presents an adjustable television antenna. Therefore, Claims 7 and 8 should be allowable.

6. Claim 15 is not unpatentable over Yajima in view of Terk under 35 U.S.C. §103(a). As noted above, Yajima is not a proper reference against Applicants' invention. Terk does not disclose or suggest the subject matter of Claim 12, from which Claim 15 depends. Thus, Claim 15 should be allowable in view of at least the dependency.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,

  
Geza C. Ziegler, Jr.

Reg. No. 44,004

12/13/02  
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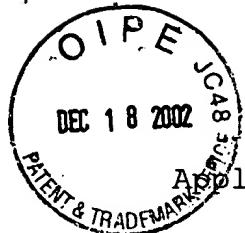
PERMAN & GREEN, LLP  
425 Post Road  
Fairfield, CT 06824  
(203) 259-1800 Ext. 134  
Customer No.: 2512

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Application No.: 09/537,501

**Marked Up Specification Replacement Section**

Please delete the section entitled "Abstract" (page 21, line 1 through line 17) and replace with the following replacement section:

**Abstract**

The invention relates to a system for matching an antenna (ANT) for a wireless communication device, the system comprising: detecting means (4, 5, 12) to detect the matching of the antenna (ANT) and to generate a matching signal on the basis of the detected matching, control means (7) to examine said matching signal, to determine the need for matching, and to generate a control signal on the basis of said matching signal, and antenna matching means (9) to adjust the matching of the antenna (ANT) on the basis of said control signal. The invention relates also to a wireless communication device and a method for matching the antenna of a wireless communication device.

[Fig. 2]

### Marked Up Claims

2. (Amended) A system for matching an antenna (ANT) for a wireless communication device, characterized in that it comprises:

detecting means (4, 5, 12) to detect the matching of the antenna (ANT) [The matching system according to claim 1, **characterized** in that said detecting means (4, 5, 12) comprise means (1, 5) to measure] by measuring the radio power reflected from the antenna (ANT) and means (6) to generate a matching signal on the basis of the measurement on the reflected radio power,

control means (7) to examine said matching signal, to determine the need for matching, and to generate a control signal on the basis of said matching signal, and

antenna matching means (9) to adjust the matching of the antenna (ANT) on the basis of said control signal.

5. (Amended) A wireless communication device (MS) comprising at least an antenna (ANT), characterized in that the wireless communication device (MS) also comprises:

detecting means (4, 5, 12) to detect the matching of the antenna (ANT) [The wireless communication device (MS) according to claim 4, **characterized** in that said detecting means (4, 5, 12) comprise means (1, 5) to measure] by measuring the radio power reflected from the antenna (ANT)

and means (6) to generate a matching signal on the basis of the measurement on the reflected radio power,

control means (7) to examine said matching signal, to determine the need for matching, and to generate a control signal on the basis of said matching signal, and

antenna matching means (9) to adjust the matching of the antenna (ANT) on the basis of said control signal.

7. (Twice Amended) The wireless communication device (MS) according to claim [4] 5, **characterized** in that said detecting means (4, 5, 12) comprise means (12) to measure a distance and means (6) to generate the matching signal on the basis of said distance measurement.

9. (Twice Amended) The wireless communication device (MS) according to claim [4] 5, in which the antenna (ANT) is arranged to be placed in at least two different positions, **characterized** in that said detecting means (4, 5, 12) comprise means (12) to examine the position of the antenna (ANT) and means (6) to generate the matching signal on the basis of the position of the antenna (ANT).

10. (Twice Amended) The wireless communication device (MS) according to claim [4] 5, comprising at least a keypad cover (13) arranged to be placed in at least two different positions, **characterized** in that said detecting means (4, 5, 12) comprise means (14) to examine the position of the keypad cover (13) and

means (6) to generate the matching signal on the basis of the position of the keypad cover (13).

12. (Amended) A method for matching the antenna of a wireless communication device, characterized in that in the method, the matching of the antenna (ANT) is detected [The method according to claim 11, characterized in that said matching signal is generated] by measuring the radio power reflected from the antenna (ANT), a matching signal is generated on the basis of the detected matching, said matching signal is examined to determine the need for matching the antenna (ANT), wherein a control signal is generated on the basis of said matching signal, and the matching of the antenna (ANT) is adjusted on the basis of said control signal.

14. (Amended) The method according to claim [11] 12, characterized in that said matching signal is generated by measuring the distance of the wireless communication device from objects in the vicinity of the wireless communication device at the time.

15. (Amended) The method according to claim [11] 12, in which the antenna (ANT) can be placed in at least two different positions, characterized in that for generating said matching signal, the position of the antenna (ANT) is examined.